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SITE SUMMARY AND RECOMMENDATION

Under Task Order 14 of Contract EP-W-05-042 (Region 1 Superfund Technical Assessment and Response Team III [START]), United States Environmental Protection Agency (EPA) has tasked the Weston Solutions, Inc. (WESTON[®]) Region 2 Site Assessment Team (SAT) with a Site Reassessment to gather and evaluate new information on the LH Caribe Inc. site in Cayey, Puerto Rico, and to determine whether further Superfund action is needed. The Site Reassessment is required as a result of an ongoing investigation by the Office of Inspector General (OIG) into allegations of laboratory fraud against A4 Scientific, Inc. of The Woodlands, Texas (A4 Scientific). As part of the OIG investigation, EPA has determined that Contract Laboratory Program (CLP) Organics analytical data generated by A4 Scientific from July 2010 to September 2013 are of unknown quality, and that the data should not be used to make public health or environmental decisions or be used in any scientific research.

A4 Scientific generated CLP Target Compound List (TCL) Organics analytical data for samples collected by WESTON Region 2 SAT in support of a combined Preliminary Assessment/Site Inspection (PA/SI) evaluation of the LH Caribe Inc. site. WESTON completed the PA/SI, including May 2011 sample collection activities, under EPA Contract EP-S5-06-04 (Region 5 START III). EPA used the results of the PA/SI, including the data generated by A4 Scientific, to make a Superfund decision regarding the site. EPA has reconsidered its decision because the original decision was based, in part, on data that EPA has determined to be of unknown quality. To support this reconsideration, WESTON Region 2 SAT has performed additional sampling on behalf of EPA to replace the affected data. This document explains how these new data do not change the original EPA decision.

The Site Reassessment activities included negotiation of site access; site reconnaissance activities; re-evaluation of site conditions; development of an updated Quality Assurance Project Plan (QAPP) including sampling and analysis requirements; procurement and oversight of direct-push drilling services; collection of soil samples at the site in January 2015; CLP analyses and data validation; and re-evaluation of likelihood of release, waste characteristics, and targets for migration and exposure pathways. This Site Reassessment Report provides an updated description of the site, a discussion of investigative activities, the results of the January 2015 sampling effort, and a hazard assessment including a Hazard Ranking System (HRS) site score.

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The LH Caribe Inc. (LHC) site (hereafter referred to as “the site”) (EPA ID No. PRD104097852) is a former manufacturing facility of approximately 2.7 acres in an industrial park setting, with a private residential area to the north. The building lies on the east side of the site, with a paved parking lot on the west side. Topography of the site slopes south and east. The facility is currently owned by Becton Dickinson (a.k.a., BD Diagnostics, BD Biosciences), which operates out of multiple adjacent buildings within the industrial park.

The facility, originally designated as Building No. T-1254-0-79, was built by Puerto Rico Industrial Development Company (PRIDCO) in 1979. Toro Irrigation Inc., the initially-planned tenant, never occupied the premises. LH Caribe Inc. (a.k.a., LH Research PR, Inc.) occupied the facility between 1980 and 1989; they manufactured power supplies and used the solvents isopropyl alcohol and trichloroethane (TCA). During operations, the company generated approximately 55 gallons of spent solvent every three months, operating as a Resource Conservation and Recovery Act (RCRA) Small Quantity Generator (SQG) under permit number PRD104097852. On October 4, 1989, the Puerto Rico Environmental Quality Board (EQB) inspected the facilities and found eleven violations of regulations, which the company failed to correct. The facility had three cesspools and a septic tank, as well as a septic tank with three injection wells; these units were closed in 1991. Becton Dickinson (BD), the current owner/operator, purchased the property in February 2007 and began biochemical product manufacturing later that year. In the 2011 investigation, BD was recognized as a RCRA SQG (Permit No.: PRR000019265) that generates the waste chemicals formaldehyde (DMF), methanol, and ethanol. Currently, BD is a Conditionally Exempt Generator (CESQG) under permit #PR0000128314.

In 2006, WESTON and EPA personnel mobilized to the Central Puerto Rico Aqueduct and Sewer Authority (PRASA) Laboratory to review quarterly public well system organic analytical data for January 2002 through September 2006. WESTON and EPA reviewed the quarterly monitoring data for PRASA-operated wells and filtration plants throughout Puerto Rico and identified public wells in Cayey exhibiting volatile organic compound (VOC) contamination. Analytical results for groundwater samples collected by WESTON in December 2008 confirmed the presence of trichloroethylene (TCE) at levels exceeding the Hazard Ranking System (HRS) Level I benchmark and tetrachloroethylene (PCE) above detection limits in Cayey drinking water wells. Analytical data of groundwater samples collected from University of Puerto Rico (UPR) Cayey Wells 1 and 2, located on the UPR-Cayey campus approximately 1.5 miles southwest of the site, and from the inactive PRASA Bungalo/Montellano well, located less than one mile southwest of the site, indicated the presence of TCE. TCE was also detected at 0.64 micrograms per liter (µg/L) in post-treatment samples collected from the UPR-Cayey water system, after treatment with chlorine and activated carbon.

Therefore, pre-Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) screening activities for the site were conducted under EPA’s Cayey Site Discovery Initiative (SDI) starting in 2008. As part of the pre-CERCLIS screening, WESTON conducted site visits of the former LH Caribe Inc. building on November 19, 2008 and August 31, 2009; the building interior was observed to be clean and well maintained. However, the site was recommended for further assessment under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) based on the site’s historical generation of solvent waste, the presence of abandoned

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cesspools, septic tank, and septic injection system, as well as the site's proximity to contaminated wells.

On March 18, 2011, WESTON conducted an on-site reconnaissance of the site. The reconnaissance included an interview with the current plant manager and a site walk where WESTON personnel observed site features including possible sample locations.

On May 16, 2011, WESTON personnel collected surface soil and subsurface soil samples from seven boreholes advanced throughout site using Geoprobe[®] direct-push technology and a groundwater sample from a nearby water supply well operated by BD. Based on the detections of VOCs in the UPR-Cayey wells, in particular TCE and PCE, the samples were analyzed for TCL VOCs only by A4 Scientific through the EPA CLP as part of the Preliminary Assessment/Site Inspection (PA/SI) evaluation of the site. As discussed in the Site Reassessment Introduction, EPA considers the TCL VOC analytical data generated by A4 Scientific for the LHC site of unknown quality; therefore, the data is neither documented nor discussed in this report.

The Site Reassessment required the generation of valid CLP Organic analytical data for use in a re-evaluation of the site, specifically TCL VOC data. Therefore, on January 21, 2015, WESTON personnel re-collected surface soil and subsurface soil samples from seven boreholes advanced throughout the site using Geoprobe direct-push technology. These boreholes were co-located from the borehole locations originally drilled during the 2011 PA/SI sampling activities. Two aqueous samples (including one environmental field duplicate sample) were collected approximately 500 feet south of the site, from the water supply well that provides water for industrial purposes to the BD on-site facility. Groundwater was encountered at one of the seven borehole locations; therefore, only groundwater sample 1459-GW01, along with one field duplicate, were collected. The soil and aqueous samples were analyzed for TCL VOCs only by ALS Laboratory Group – Salt Lake City – DATAC through the EPA CLP. Analytical results indicate non-detect results or estimated concentrations below reporting detection limits (RDL) for all environmental VOC parameters. For soil samples, the only detections above RDLs were acetone and 2-butanone; both are common laboratory contaminants that are not known to be site-related. All other results for soil samples were either non-detect or estimated values below RDLs. For aqueous samples, the only detection above RDLs was chloroform in sample 1459-WSW01, with a concentration of 6.5 µg/L. Chloroform is a common by-product of water treatment and is not related to site activities. All other results for aqueous samples were either non-detect or estimated values below RDLs. Therefore, there is no known CERCLA-eligible waste source present at the site.

An HRS QuickScore (Version 3.0.3) analysis of the LH Caribe Inc. site was conducted on the basis of a potential release to groundwater. However, based on the January 2015 sampling results, a CERCLA-eligible source has not been identified at the site. The Quickscore analysis resulted in a site score of 0.00, which is below the 28.5 minimum score required for placement on the NPL.

Based on an evaluation of the above conditions, a recommendation of **NO FURTHER REMEDIAL ACTION PLANNED (NFRAP)** is given to the LH Caribe Inc. site.